In the piece removed at the end of the starvation period the following changes were observed :

Distinct transformation of the cell-protaplasm, part of which has disappeared altogether. The nuclei are badly (pale) stained. Around the numerous cells are leucocytes, which in some instances have entered the cell, thus filling the vacancies left by the disappearance of the protoplasm. The nuclei of the leucocytes are of a color similar to that of the protoplasm of the nerve cell. Size and shape of the leucocytes vary greatly; sometimes two or three nuclei are seen in them.

After refeeding of four weeks' duration, when the animal had returned to its normal physical condition, the brain tissue presented the following changes :

Signs of further decay and atrophy of cells. Of some cells only the nuclei are left, in others a narrow border of protoplasm is seen around the nucleus. The nuclei are now intensely stained and coarsely granulated Sometimes nothing remains of the cell; its original position is marked by a vacuum. The number of leucocytes is increased ; they are situated sometimes in the remaining protoplasm of the nerve cell, crowding the nucleus of the latter towards the periphery. Occasionally the nucleus is kidney shaped, in which case the leucocytes is situated in the "hylus." Sometimes the granula of the nucleus (of the nerve cell) are so coarse as to entirely hide the nucleolus from sight Generally the protoplasm undergoes further retrogressive changes. The nucleus, after having gone through the described alterations, either returns to the normal state or perishes.

After six and one-half weeks of refeeding the following conditions were present : Around the necleus a finely granulated and deeply stained protoplasm begins to accumulate ; sometimes one sees the latter bulge out in the shape of sprouts. There are fewer leucocytes around the nucleus ; none are seen around the protoplasm of the cells.

After eight-weeks' refeeding the cells approach more nearly to the normal condition with the exception of the development of the protoplasmic processes, which still remain rudimentary.

Once the author by accident succeeded in seeing proliferation of a cell.

L. recommends that in studying the anatomical condition in cases of nervous and mental diseases the principal endeavor should be to find out the cause of the changes observed instead of only describing these latter, as by finding out the cause a regeneration of decaying nerve elements—that is, a cure of the disease—may be hoped for.

ONUF (ONUFROWICZ.).

CLINICAL.

Akinesia Algera.—Erb (*Deutsche Zeitschr. f. Nervenheilk.*, Vol. V., p. 6).

Erb, in this article, continues the history of a remarkable case of akinesia algera published in the same journal two years ago. The patient was a man who for twenty-two years had been a sufferer, and who for fourteen years had to preserve a strictly horizontal position in order to avoid "symmetrical" pain He could not read, he could not tolerate being read to, and three or four words at one time was all that could be spoken to him at once without bringing on the pain. Mentally, he had remained fresh and clear and in a continuous and flowing manner. Under the influence of assurance and therapeutic measures directed to the heart and vascular system and the general nutrition, there was a marked improvement in the increased tolerance to hear speech, especially if it was not continuous. He was terribly frightened when people spoke quickly. There was no improvement in the general condition, and especially weakness of circulation was not improved. "Symmetrical" pain" in arms and legs, especially during digestion. The eating of meat caused this in the highest degree. When the first bite of meat reached the stomach this "symmetrical pain" and weakness became so great in the arms that a servant must needs help him carry the next bite to the mouth. Vegetables and soft foods were borne better. At the same time the condition of the stomach and bowels remained quite normal. An unlucky attempt to listen to rapid and uninterrupted speech gave him a severe setback, and then the severest "symmetrical pain" in the arms and legs was associated with pain in the head and noises in the ears.

From this time on it was sought to convince the patient that his pains were largely due to expectant attention and to engender the conviction that his symptoms were subjective psychical. And, moreover, that disturbance of the digestive organs was a weighty factor in causing the nervous symptoms, and that the strengthening of these was most important. Therapeutic measures to this effect were directed and weight given to suggestive self-influence, self-control and smothering of the expectant attention. The patient began by hearing two or three words spoken to him, with one or two extra ones added each time, and each succeeding time spoken the least bit faster, until he was able to listen to continuous and rapid speech. A similar plan was pursued to effect a change from the horizontal position which he occupied, beginning by raising his head a trifle and day after day adding a little more, until it was brought into erect posture by infinitely minute degrees; and this continued until he was able to walk and travel. The eventual results were astonishing.

In commenting on the case, Erb says that after he had seen this remarkable case and watched its course, and after a further experience with the disease, he inclines more to the opinion that akinesia algera, in spite of the fact that its clinical picture is sharply defined in many directions, is not an independent disease but a form of the functional neuroses in which the important symptoms are the psychical ones As was the case when agaraphobia, cephalic impressions, spinal irritation, etc., were considered as individual diseases, so will it be with akinesia algera. After a more extensive and intimate acquaintance with it we shall learn to give it its right place in that large group of neuroses which now comprises hysteria, neurasthenia, hypochondria, certain psychoses, maladie des tics, etc , and determine how it differs from these other forms of disease.

J. C.

Akinesia Algera.—Bechterew (*Deutsche Zeitschr. fur Nervenheilkunde*, 5 Bd , 6 Heft). The patient was a young man in whom disease began ten years ago after a trauma. A wagon drove over his feet. He was much frightened, lost consciousness for a while and had to stay in bed for a week. Since then pain in feet and legs, got easily tired, noticed lessening of sensation over the whole body ; then pain in the muscles, especially when walking. Constant increase of these symptoms. Since two years in a gloomy mood, disinclination to work, apathy and frequent vertigo Formerly had double vision.

His present condition is the following : Muscular action causes great pain in active muscles. This pain is accompanied by great fatigue, acceleration of respiration and pulse and flushing of the face. These symptoms are noticed when the patient walks or stands or presses one's hand, indeed with any muscular action; the muscles of the face being least affected. Percussion of the muscles, and also of the bones of the vertebral column and extremities, causes great pain accompanied by the other symptoms mentioned. Knee-jerk normal on the right knee, lessened on the left. Cutaneous reflexes considerably diminished. Marked analgesia over the whole surface of the skin. Pushing a needle deep in until it enters the muscles is painful, however. Electro-cutaneous sensibility, sense of temperature and touch diminished. Muscular sense im-